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Summary of Occupational Injuries, Illnesses, and Fatalities in the Petroleum Industry

As Reported to the American Petroleum Institute

Covering Petroleum and Petrochemical Operations of Reporting Companies for 1990

JULY 1991

American Petroleum Institute
1220 L Street, Northwest
Washington, D.C. 20005

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Safety and Fire Department

JULY 1990

American
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Institute

SUMMARY OF OCCUPATIONAL INJURIES, ILLNESSES, AND FATALITIES IN THE PETROLEUM INDUSTRY FOR 1990

Participants in the 1990 summary were asked to submit data according to the Bureau of Labor Statistics (BLS) Recordkeeping Guidelines for Occupational Injuries and Illnesses - September 1986 edition. The Survey provides incidence rates per 200,000 hours worked on the same basis as those reported by BLS.

This summary report is based on data submitted to the American Petroleum Institute (API) by 120 oil and gas companies, employing over 319,115 persons with a work experience of over 655,464,000 hours. The Total Case Incidence Rate was 3.52 for 1990, as compared to 3.59 for 1989. This rate is the number of total recordable cases per 200,000 hours worked or, approximately, the number of cases per 100 full-time workers per year.

The Fatal plus Days Away From Work Incidence Rate for 1990 averaged 0.89 per 200,000 hours worked, compared to 0.97 in 1989. The occurrence of Fatal or Days Away from Work cases during 1990 averaged 1 case for every 110 employees compared to one case for every 101 employees in 1989. One death among petroleum workers was reported in 1990 for every 22,794 employees, compared to one death for every 6,002 employees in 1989.

NOTE: Company participation in the API annual statistical survey is voluntary and fluctuates from year to year.

These data cover company employees only; contractor safety statistics are not included.

Additional copies of this report may be obtained by contacting the API Publications and Distribution Department at 202-682-8375.

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

1		2	3	4			5						6		
				Recordable Cases			Extent and Outcome of Injury and Illness						Incidence Rates		
				a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.
								Lost Workday Cases							
Function	Function Key[1]	Average Number of Employees	Hours Worked Thousands	Injuries	Illnesses	Total	Fatalities	Total Lost Workday Cases	Cases Involving Days Away From Work	Number of Days Away From Work	Number of Days of Restricted Activity	Non Fatal Cases Without Lost Workdays	Total Cases	Fatal plus Days Away From Work Cases	Lost Workdays Days Away From Work
Exploration	a	6,703	13,452	44	1	45	0	12	9	51	32	33	0.67	0.13	0.76
Production	b	35,472	75,905	984	36	1,020	1	401	258	7,419	2,117	618	2.69	0.68	19.55
E&P-Not Sep[2]	ab	20,852	42,413	512	3	515	1	234	165	4,205	701	280	2.43	0.78	19.83
E&P Subtotal		63,027	131,770	1,540	40	1,580	2	647	432	11,675	2,850	931	2.40	0.66	17.72
Gas Processing	c	6,409	12,870	197	6	203	1	58	51	1,170	288	144	3.15	0.81	18.18
Drilling	d	1,007	2,195	62	0	62	0	32	28	563	16	30	5.65	2.55	51.30
Petrochemical Mfg	e	17,378	36,050	519	31	550	0	281	79	2,482	4,060	269	3.05	0.44	13.77
Refining	f	52,432	108,299	2,830	392	3,222	5	1,403	577	13,807	19,173	1,814	5.95	1.07	25.50
Marketing-Whole	g	22,081	43,896	847	18	865	0	451	310	5,554	1,430	414	3.94	1.41	25.31
Marketing-Retail	h	37,668	72,786	1,907	18	1,925	2	884	400	9,259	5,461	1,039	5.29	1.10	25.44
Mrkt. Not Sep[3]	gh	16,669	33,115	638	17	655	0	292	241	4,600	1,504	363	3.96	1.46	27.78
Mrkt. Subtotal		76,418	149,797	3,392	53	3,445	2	1,627	951	19,413	8,395	1,816	4.60	1.27	25.92

Incidence Rates (Column 6) are calculated as follows:

Column 6(j) = $\frac{\text{Column 4(c)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$ Column 6(k) = $\frac{\text{Column 5(d)} + \text{5(f)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$ Column 6(l) = $\frac{\text{Column 5(g)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$

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OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

1		2	3	4			5						6		
				Recordable Cases			Extent and Outcome of Injury and Illness						Incidence Rates		
				a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.
								Lost Workday Cases							
Function	Function Key[1]	Average Number of Employees	Hours Worked Thousands	Injuries	Illnesses	Total	Fatalities	Total Lost Workday Cases	Cases Involving Days Away From Work	Number of Days Away From Work	Number of Days of Restricted Activity	Non Fatal Cases Without Lost Workdays	Total Cases	Fatal plus Days Away From Work Cases	Lost Workdays Days Away From Work
Pipeline-Liquid	i	10,152	20,621	306	28	334	1	136	88	2,380	916	197	3.24	0.86	23.08
Pipeline-Gas	j	14,541	31,108	617	52	669	0	340	238	4,183	2,828	329	4.30	1.53	26.89
Pipeline-Not Sep[4]	ij	10,368	20,452	306	10	316	1	165	117	2,787	585	150	3.09	1.15	27.25
Pipeline-Subtotal		35,061	72,181	1,229	90	1,319	2	641	443	9,350	4,329	676	3.65	1.23	25.91
Marine-Tanker	k	1,487	4,484	77	0	77	0	62	55	1,667	109	15	3.43	2.45	74.35
Marine-Inland	l	701	2,664	62	0	62	0	43	31	676	0	19	4.65	2.33	50.75
Marine-Not Sep[5]	kl	1,116	4,967	67	1	68	1	35	24	1,250	87	32	2.74	1.01	50.33
Marine-Subtotal		3,304	12,115	206	1	207	1	140	110	3,593	196	66	3.42	1.83	59.31
Research & Dev.	m	9,305	18,977	176	28	204	0	67	30	298	898	137	2.15	0.32	3.14
General Services	n	3,425	6,961	73	3	76	0	34	10	75	306	42	2.18	0.29	2.15
Admin.,Eng.,Other	o	51,349	104,249	577	79	656	1	327	197	3,183	2,213	328	1.26	0.38	6.11
Total		319,115	655,464	10,801	723	11,524	14	5,257	2,908	65,609	42,724	6,253	3.52	0.89	20.02

Incidence Rates (Column 6) are calculated as follows:

Column 6(j) = $\frac{\text{Column 4(c)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$ Column 6(k) = $\frac{\text{Column 5(d)} + \text{5(f)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$ Column 6(l) = $\frac{\text{Column 5(g)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$

[1]Keyed to definitions outlined in the API Fire and Safety Data System User's Manual.
[2]Exploration and Production data unable to be separated into Exploration or Production functions.
[3]Marketing data unable to be separated into Wholesale or Retail functions.
[4]Pipeline data unable to be separated into Liquid or Gas functions.
[5]Marine data unable to be separated into Tanker or Inland functions.

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

The following code will indicate the functions for which each company reported:

a - Exploration	g - Marketing - Wholesale	k - Marine - Tanker
b - Production	h - Marketing - Retail	l - Marine - Inland
(ab) - Exploration & Production-Not Sep.	(gh) - Marketing-Not Separated	(kl) - Marine-Not Separated
c - Gas Processing	i - Pipeline - Liquid	m - Research & Development
d - Drilling	j - Pipeline - Gas	n - General Services
e - Petrochemical Manufacturing	(ij) - Pipeline-Not Separated	o - Administration, Engineering & Other
f - Refining		

			Recordable Cases			Extent and Outcome of Injury and Illness						Incidence Rates			
			a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	
							Lost Workday Cases								
Co. No.	Average Number of Employees	Hours Worked Thousands	Injuries	Illnesses	Total	Fatalities	Total Lost Work-day Cases	Cases Involving Days Away From Work	Number of Days Away From Work	Number of Days of Restricted Activity	Non Fatal Cases Without Lost Workdays	Total Cases	Fatal plus Days Away From Work Cases	Lost Workdays Away From Work	Function
ALL FUNCTIONS															
Total	319,115	655,464	10,801	723	11,524	14	5,257	2,908	65,609	42,724	6,253	3.52	0.89	20.02	
00003	52	104	0	0	0	0	0	0	0	0		0.00	0.00	0.00	g
00005	2,913	5,826	59	2	61	1	29	29	1,259	22	31	2.09	1.03	43.22	abcgo
00006	140	318	18	2	20	0	11	6	78	57	9	12.58	3.77	49.06	f
00010	37	77	3	0	3	0	1	1	1	0	2	7.79	2.60	2.60	j
00011	3,948	7,846	193	3	196	0	104	34	1,437	1,309	92	5.00	0.87	36.63	(ab)ef(gh)imo
00013	17,647	35,659	1,083	80	1,163	1	369	198	5,864	1,539	793	6.52	1.12	32.89	(ab)fgh(ij)(kl)mno
00014	14,379	30,081	535	17	552	0	221	157	5,007	995	331	3.67	1.04	33.29	ab(ao)cdfg(ij)kmno
00017	645	1,443	33	10	43	0	17	17	458	0	26	5.96	2.36	63.48	i
00019	482	1,005	10	0	10	1	6	6	71	0	3	1.99	1.39	14.13	(ab)
00020	32	62	1	0	1	0	1	0	0	4		3.23	0.00	0.00	f
00021	249	483	7	1	8	0	1	1	9	142	7	3.31	0.41	3.73	i
00022	100	182	0	0	0	0	0	0	0	0		0.00	0.00	0.00	bo
00023	1,438	2,580	20	0	20	0	7	7	260	12	13	1.55	0.54	20.16	bc(ij)o
00024	20,826	45,881	657	60	717	1	411	337	7,170	1,088	305	3.13	1.47	31.25	abcf(gh)(ij)o
00025	52	109	3	0	3	0	1	1	58	0	2	5.50	1.83	106.42	o
00026	73	146	3	0	3	0	1	1	1	0	2	4.11	1.37	1.37	fgo
00027	2,435	5,263	76	0	76	0	28	28	832	0	48	2.89	1.06	31.62	(ab)co
00029	685	1,412	14	0	14	0	8	8	100	2	6	1.98	1.13	14.16	i
00030	1,201	2,336	35	2	37	0	13	13	363	0	24	3.17	1.11	31.08	j
00031	3,338	7,515	150	15	165	0	64	64	800	406	101	4.39	1.70	21.29	j
00032	16,966	35,283	208	14	222	0	108	27	833	924	114	1.26	0.15	4.72	abcf(gh)(ij)(kl)mno
00033	17	35	3	0	3	0	1	1	3	7	2	17.14	5.71	17.14	i

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

Co. No.	Average Number of Employees	Hours Worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Work-day Cases	f. Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Work days Days Away From Work	Function
ALL FUNCTIONS (continued)															
00035	588	1,153	10	0	10	0	1	1	9	0	9	1.73	0.17	1.56	(ab)
00038	132	300	8	0	8	0	1	1	9	0	7	5.33	0.67	6.00	i
00039	1,104	2,296	19	4	23	0	19	3	65	499	4	2.00	0.26	5.66	e
00041	26,472	55,633	774	125	899	0	370	149	3,484	4,502	529	3.23	0.54	12.52	abfghijkl(kl)no
00042	2,563	5,104	26	5	31	0	18	4	21	256	13	1.21	0.16	0.82	mno
00043	460	1,049	51	10	61	0	10	10	361	42	51	11.63	1.91	68.83	fi
00047	20,887	41,775	1,288	0	1,288	1	643	200	4,414	6,351	644	6.17	0.96	21.13	fghij
00048	29	59	6	0	6	0	3	3	42	0	3	20.34	10.17	142.37	bc
00053	125	313	23	3	26	0	6	6	155	0	20	16.61	3.83	99.04	f
00056	4,706	8,877	268	11	279	0	216	127	1,959	2,058	63	6.29	2.86	44.14	j
00057	31	51	6	0	6	0	5	5	152	0	1	23.53	19.61	596.08	c
00058	1,645	3,486	38	13	51	0	14	14	294	38	37	2.93	0.80	16.87	abcefgh(ij)
00060	450	639	10	1	11	0	3	2	78	5	8	3.44	0.63	24.41	(ij)
00062	65	124	1	0	1	0	1	1	23	18		1.61	1.61	37.10	abo
00064	3,984	7,250	283	0	283	0	67	67	1,071	458	216	7.81	1.85	29.54	(gh)
00065	9,488	17,674	241	15	256	0	102	32	1,636	1,422	154	2.90	0.36	18.51	abcdfgimno
00068	285	586	19	2	21	0	15	9	128	188	6	7.17	3.07	43.69	emo
00071	665	1,300	59	3	62	0	23	23	119	0	39	9.54	3.54	18.31	h
00074	477	913	9	0	9	0	3	2	9	40	6	1.97	0.44	1.97	jno
00075	774	1,730	31	2	33	0	21	5	123	177	12	3.82	0.58	14.22	bfgo
00077	46	94	2	0	2	0	0	0	0	0	2	4.26	0.00	0.00	bo
00079	341	692	18	0	18	0	8	6	282	22	10	5.20	1.73	81.50	fi
00083	123	236	9	0	9	0	6	6	55	0	3	7.63	5.08	46.61	ijlo
00086	63	131	2	0	2	0	1	1	8	26	1	3.05	1.53	12.21	i
00090	18,655	38,346	403	16	419	1	215	36	1,249	2,518	203	2.19	0.19	6.51	(ab)cefgh(ij)mno
00091	319	607	4	0	4	1	1	1	5	0	2	1.32	0.66	1.65	i
00092	40	78	4	0	4	0	1	1	47	0	3	10.26	2.56	120.51	i
00093	58	109	2	0	2	0	2	2	2	0		3.67	3.67	3.67	io
00095	1,734	3,451	113	0	113	0	80	18	353	617	33	6.55	1.04	20.46	o
00099	26,554	53,183	388	38	426	0	198	54	1,825	2,511	228	1.60	0.20	6.86	abccefghimno
00100	154	272	4	0	4	0	0	0	0	0	4	2.94	0.00	0.00	cgjc
00101	127	278	12	0	12	0	12	12	38	0		8.63	8.63	27.34	fgh
00102	589	1,163	13	0	13	0	6	6	90	0	7	2.24	1.03	15.48	(ab)
00103	25	50	0	0	0	0	0	0	0	0		0.00	0.00	0.00	g
00106	29,900	62,328	693	42	735	2	386	193	2,677	6,441	347	2.36	0.63	8.59	abefgiklmo

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

Co. No.	Average Number of Employees	Hours Worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Workday Cases	f. Lost Workday Cases: Cases Involving Days Away From Work	g. Lost Workday Cases: Number of Days Away From Work	h. Lost Workday Cases: Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Workdays Days Away From Work	Function
ALL FUNCTIONS (continued)															
00107	7,884	17,147	326	44	370	0	167	119	2,496	643	203	4.32	1.39	29.11	f(gh (ij)(kl)mo
00108	3,000	7,440	72	0	72	0	13	13	514	0	59	1.94	0.35	13.82	j
00109	21,331	41,276	680	31	711	1	260	154	2,585	1,667	450	3.45	0.75	12.53	ab(a))cefg(ij)mo
00111	390	927	15	0	15	0	7	0	0	96	8	3.24	0.00	0.00	i
00116	199	428	12	0	12	0	8	8	151	0	4	5.61	3.74	70.56	f
00118	9,899	19,839	336	38	374	1	198	81	1,656	2,577	175	3.77	0.83	16.69	(ab):ef(gh)i(kl)mo
00121	350	980	23	3	26	0	23	26	658	161	3	5.31	5.31	134.29	f
00122	631	1,174	22	0	22	0	4	4	56	11	18	3.75	0.68	9.54	ci
00124	248	483	4	0	4	0	2	0	0	8	2	1.66	0.00	0.00	j
00125	165	321	9	0	9	0	4	6	147	16	5	5.61	3.74	91.59	bcdo
00126	672	1,403	39	9	48	0	26	1	405	42	22	6.84	0.14	57.73	i
00138	105	142	6	0	6	0	3	3	78	0	3	8.45	4.23	109.86	f
00140	722	1,503	17	2	19	0	10	9	166	0	9	2.53	1.20	22.09	abgo
00144	937	1,967	25	0	25	0	10	10	179	0	15	2.54	1.02	18.20	(ij)
00162	1,373	3,155	64	20	84	0	24	13	199	356	60	5.32	0.82	12.61	j
00164	66	142	2	0	2	0	1	1	19	0	1	2.82	1.41	26.76	i
00175	499	934	46	15	61	0	19	14	187	124	42	13.06	3.00	40.04	(ab)f(ij)o
00184	6	10	0	0	0	0	0	0	0	0		0.00	0.00	0.00	cg
00190	220	449	17	0	17	0	17	8	177	54		7.57	3.56	78.84	f
00191	415	864	1	0	1	0	0	0	0	0	1	0.23	0.00	0.00	abo
00192	351	787	40	26	66	0	35	21	350	493	31	16.77	5.34	88.95	f
00193	47	96	0	0	0	0	0	0	0	0		0.00	0.00	0.00	a
00202	595	1,233	26	0	26	0	2	2	48	438	24	4.22	0.32	7.79	e
00205	326	630	13	4	17	0	4	4	325	0	13	5.40	1.27	103.17	cj
00215	1,299	2,741	14	2	16	0	7	7	136	41	9	1.17	0.51	9.92	(ab)co
00217	405	683	56	0	56	0	24	24	381	243	32	16.40	7.03	111.57	f
00218	94	196	2	0	2	0	0	0	0	0	2	2.04	0.00	0.00	f
00224	310	603	21	0	21	0	3	3	77	0	18	6.97	1.00	25.54	bcd
00225	97	223	20	0	20	0	7	6	67	1	13	17.94	5.38	60.09	bd
00226	509	1,018	7	0	7	0	3	3	29	0	4	1.38	0.59	5.70	(ab
00227	504	1,094	17	0	17	0	8	8	213	0	9	3.11	1.46	38.94	(ab
00228	679	1,545	37	1	38	0	10	9	145	18	28	4.92	1.17	18.77	f
00229	276	553	5	0	5	0	3	3	79	7	2	1.81	1.08	28.57	abc
00230	5	11	0	0	0	0	0	0	0	0		0.00	0.00	0.00	c
00232	300	624	16	0	16	0	7	7	68	0	9	5.13	2.24	21.79	(ab

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

Co. No.	Average Number of Employees	Hours worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Work-day Cases	f. Cases Involving Days Away From work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Work-days	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Work days Days Away From Work	Function
ALL FUNCTIONS (continued)															
00233	1,196	2,119	23	0	23	0	12	12	243	0	11	2.17	1.13	22.94	i
00235	1,110	2,258	4	0	4	0	2	2	3	0	2	0.35	0.18	0.27	bdo
00236	51	100	5	0	5	0	1	1	2	0	4	10.00	2.00	4.00	j
00237	55	104	2	0	2	0	2	2	51	0		3.85	3.85	98.08	i
00238	189	388	6	0	6	0	4	4	64	0	2	3.09	2.06	32.99	i
00239	445	890	12	1	13	0	9	9	449	0	4	2.92	2.02	100.90	i
00240	7	13	0	0	0	0	0	0	0	0		0.00	0.00	0.00	j
00241	78	138	1	0	1	0	0	0	0	0	1	1.45	0.00	0.00	i
00242	4	9	0	0	0	0	0	0	0	0		0.00	0.00	0.00	i
00243	74	154	9	0	9	0	5	1	45	58	4	11.69	1.30	58.44	i
00245	799	1,596	36	5	41	0	14	12	113	30	27	5.13	1.50	14.14	f
00246	1,343	2,778	45	0	45	0	4	4	38	0	41	3.24	0.29	2.74	bd
00247	105	205	4	0	4	0	1	1	12	0	3	3.90	0.98	11.71	i
00248	2,250	4,685	64	0	64	0	24	7	231	257	40	2.73	0.30	9.86	efo
00250	9,332	18,659	424	4	428	2	292	252	5,045	0	134	4.59	2.72	54.08	(ab)fgh(ij)lo
00251	4,168	8,594	128	20	148	1	72	51	1,759	627	75	3.44	1.21	40.94	fgo
00252	180	1,480	26	0	26	0	16	16	16	0	10	3.51	2.16	2.16	kl
00254	350	855	34	0	34	0	18	18	470	0	16	7.95	4.21	109.94	d
00255	476	977	18	0	18	0	3	3	20	0	15	3.68	0.61	4.09	i
00256	12	27	0	0	0	0	0	0	0	0		0.00	0.00	0.00	i
00258	14	24	1	1	2	0	1	1	1	0	1	16.67	8.33	8.33	i
00260	51	102	2	0	2	0	0	0	0	0	2	3.92	0.00	0.00	i
00261	148	297	2	0	2	0	2	2	24	9		1.35	1.35	16.16	(ij)
00262	110	211	0	0	0	0	0	0	0	0		0.00	0.00	0.00	a
00263	202	444	8	1	9	0	6	6	44	46	3	4.05	2.70	19.82	fo
00264	203	438	1	0	1	0	0	0	0	0	1	0.46	0.00	0.00	(ij)
00265	9	20	0	0	0	0	0	0	0	0		0.00	0.00	0.00	j
00266	116	262	8	0	8	0	1	1	1	5	7	6.11	0.76	0.76	ci
00268	16	36	0	0	0	0	0	0	0	0		0.00	0.00	0.00	i
EXPLORATION															
Total	6,703	13,452	44	1	45	0	12	9	51	32	33	0.67	0.13	0.76	
00005	422	844	1	0	1	0	0	0	0	0	1	0.24	0.00	0.00	
00014	137	299	4	0	4	0	1	1	1	0	3	2.68	0.67	0.67	
00024	1,322	2,064	9	0	9	0	2	2	9	0	7	0.87	0.19	0.87	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

Co. No.	Average Number of Employees	Hours worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Workday Cases	f. Lost Workday Cases: Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Workdays Away From Work	Function
EXPLORATION (continued)															
00032	570	1,186	1	1	2	0	1	0	0	1	1	0.34	0.00	0.00	
00041	831	2,038	4	0	4	0	0	0	0	0	4	0.39	0.00	0.00	
00058	232	483	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00062	17	32	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00065	469	870	1	0	1	0	0	0	0	0	1	0.23	0.00	0.00	
00099	1,303	2,693	20	0	20	0	7	5	39	31	13	1.49	0.37	2.90	
00106	554	1,153	3	0	3	0	1	1	2	0	2	0.52	0.17	0.35	
00109	418	845	1	0	1	0	0	0	0	0	1	0.24	0.00	0.00	
00140	109	227	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00191	107	223	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00193	47	96	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00229	55	188	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00262	110	211	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
PRODUCTION															
Total	35,472	75,905	984	36	1,020	1	401	258	7,419	2,117	618	2.69	0.68	19.55	
00005	1,499	2,998	46	1	47	1	22	22	1,108	0	24	3.14	1.53	73.92	
00014	932	1,335	85	3	88	0	25	21	476	15	63	13.18	3.15	71.31	
00022	13	27	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00023	323	591	8	0	8	0	2	2	177	12	6	2.71	0.69	59.90	
00024	8,700	17,913	132	1	133	0	72	72	1,312	0	61	7.48	0.80	14.65	
00032	2,024	4,206	9	0	9	0	3	2	133	2	6	0.43	0.10	6.32	
00041	5,120	10,976	140	22	162	0	69	36	1,330	795	93	2.95	0.66	24.23	
00048	23	46	2	0	2	0	2	2	7	0		8.70	8.70	30.43	
00058	197	421	6	0	6	0	2	2	8	0	4	2.85	0.95	3.80	
00062	24	46	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00065	2,345	4,932	62	3	65	0	33	13	882	289	32	2.64	0.53	35.77	
00075	45	97	1	0	1	0	1	1	8	0		2.06	2.06	16.49	
00077	36	73	2	0	2	0	0	0	0	0	2	5.48	0.00	0.00	
00099	4,775	9,531	71	0	71	0	33	11	337	323	38	1.49	0.23	7.07	
00106	3,774	7,850	70	0	70	0	23	20	311	7	47	1.78	0.51	7.92	
00109	5,295	10,197	265	4	269	0	94	34	885	651	175	5.28	0.67	17.36	
00125	62	123	6	0	6	0	3	3	139	16	3	9.76	4.88	226.02	
00140	411	855	15	2	17	0	9	9	166	0	8	3.98	2.11	38.83	
00191	134	279	1	0	1	0	0	0	0	0	1	0.72	0.00	0.00	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

Co. No.	Average Number of Employees	Hours Worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Work-day Cases	f. Lost Workday Cases: Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Workdays Days Away From Work	Function
PRODUCTION (continued)															
00224	164	333	9	0	9	0	1	1	23	0	8	5.41	0.60	13.81	
00225	42	86	4	0	4	0	0	0	0	0	4	9.30	0.00	0.00	
00229	184	197	5	0	5	0	3	3	79	7	2	5.08	3.05	80.20	
00235	48	96	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00246	1,302	2,693	45	0	45	0	4	4	38	0	41	3.34	0.30	2.82	
EXPLORATION AND PRODUCTION-NOT SEPARATED[2]															
Total	20,852	42,413	512	3	515	1	234	165	4,205	701	280	2.43	0.78	19.83	
00011	612	1,414	11	0	11	0	5	2	28	38	6	1.56	0.28	3.96	
00013	309	612	17	0	17	0	13	13	108	0	4	5.56	4.25	35.29	
00014	4,973	10,074	101	0	101	0	42	34	1,274	286	59	2.01	0.68	25.29	
00019	482	1,005	10	0	10	1	6	6	71	0	3	1.99	1.39	14.13	
00027	996	2,277	36	0	36	0	14	14	319	0	22	3.16	1.23	28.02	
00035	588	1,153	10	0	10	0	1	1	9	0	9	1.73	0.17	1.56	
00090	4,258	8,845	110	0	110	0	49	13	564	274	61	2.49	0.29	12.75	
00102	589	1,163	13	0	13	0	6	6	90	0	7	2.24	1.03	15.48	
00109	541	1,093	5	0	5	0	2	2	6	0	3	0.91	0.37	1.10	
00118	2,783	5,172	87	0	87	0	45	30	766	69	42	3.36	1.16	29.62	
00175	54	129	1	0	1	0	0	0	0	0	1	1.55	0.00	0.00	
00215	398	827	8	2	10	0	3	3	119	34	7	2.42	0.73	28.78	
00226	509	1,018	7	0	7	0	3	3	29	0	4	1.38	0.59	5.70	
00227	504	1,094	17	0	17	0	8	8	213	0	9	3.11	1.46	38.94	
00232	300	624	16	0	16	0	7	7	68	0	9	5.13	2.24	21.79	
00250	2,957	5,913	63	1	64	0	30	23	541	0	34	2.16	0.78	18.30	
GAS PROCESSING															
Total	6,409	12,870	197	6	203	1	58	51	1,170	288	144	3.15	0.81	18.18	
00005	170	340	9	0	9	0	4	4	124	22	5	5.29	2.35	72.94	
00014	376	775	27	0	27	0	4	2	54	29	23	6.97	0.52	13.94	
00023	193	366	9	0	9	0	2	2	8	0	7	4.92	1.09	4.37	
00024	797	1,656	30	4	34	1	8	7	161	159	25	4.11	0.97	19.44	
00027	517	1,077	25	0	25	0	8	8	324	0	17	4.64	1.49	60.17	
00032	907	1,886	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00048	6	13	4	0	4	0	1	1	35	0	3	61.54	15.38	538.46	
00057	51	51	6	0	6	0	5	5	152	0	1	23.53	19.61	596.08	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
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GAS PROCESSING (continued)															
00058	27	56	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00065	189	373	9	1	10	0	2	1	3	3	8	5.36	0.54	1.61	
00090	343	714	0	1	1	0	1	0	0	7		0.28	0.00	0.00	
00099	690	1,323	6	0	6	0	3	1	81	12	3	0.91	0.15	12.24	
00100	102	182	3	0	3	0	0	0	0	0	3	3.30	0.00	0.00	
00109	1,063	2,157	26	0	26	0	9	7	87	48	17	2.41	0.65	8.07	
00118	165	310	5	0	5	0	2	2	2	0	3	3.23	1.29	1.29	
00122	491	894	17	0	17	0	3	3	48	8	14	3.80	0.67	10.74	
00125	16	36	3	0	3	0	1	3	8	0	2	16.67	16.67	44.44	
00184	5	8	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00205	21	47	3	0	3	0	2	2	28	0	1	12.77	8.51	119.15	
00215	56	123	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00224	127	235	12	0	12	0	2	2	54	0	10	10.21	1.70	45.96	
00229	17	168	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00230	5	11	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00266	35	69	3	0	3	0	1	1	1	0	2	8.70	2.90	2.90	
DRILLING															
Total	1,007	2,195	62	0	62	0	32	28	563	16	30	5.65	2.55	51.30	
00014	69	146	5	0	5	0	3	3	25	0	2	6.85	4.11	34.25	
00065	81	157	3	0	3	0	2	1	1	8	1	3.82	1.27	1.27	
00099	375	735	4	0	4	0	2	0	0	7	2	1.09	0.00	0.00	
00125	5	13	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00224	19	35	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00225	55	137	16	0	16	0	7	6	67	1	9	23.36	8.76	97.81	
00235	12	32	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00246	41	85	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00254	350	855	34	0	34	0	18	18	470	0	16	7.95	4.21	109.94	
PETROCHEMICAL MANUFACTURING															
Total	17,378	36,050	519	31	550	0	281	79	2,482	4,060	269	3.05	0.44	13.77	
00011	511	1,156	29	1	30	0	16	3	9	134	14	5.19	0.52	1.56	
00039	1,104	2,296	19	4	23	0	19	3	65	499	4	2.00	0.26	5.66	
00058	224	464	8	0	8	0	1	1	2	0	7	3.45	0.43	0.86	
00068	190	390	19	2	21	0	15	9	128	188	6	10.77	4.62	65.64	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
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PETROCHEMICAL MANUFACTURING (continued)															
00090	4,540	9,503	136	0	136	0	88	13	522	1,230	48	2.86	0.27	10.99	
00099	2,678	5,495	51	10	61	0	27	6	376	196	34	2.22	0.22	13.69	
00106	3,745	7,790	137	10	147	0	83	26	1,026	1,125	64	3.77	0.67	26.34	
00109	2,128	4,328	48	4	52	0	9	6	214	44	43	2.40	0.28	9.89	
00118	988	1,977	30	0	30	0	16	9	92	133	14	3.03	0.91	9.31	
00202	595	1,233	26	0	26	0	2	2	48	438	24	4.22	0.32	7.79	
00248	676	1,418	16	0	16	0	5	1	0	73	11	2.26	0.14	0.00	
REFINING															
Total	52,432	108,299	2,830	392	3,222	5	1,403	577	13,807	19,173	1,814	5.95	1.07	25.50	
00006	140	318	18	2	20	0	11	6	78	57	9	12.58	3.77	49.06	
00011	751	1,652	88	2	90	0	54	4	50	1,133	36	10.90	0.48	6.05	
00013	1,560	3,385	196	53	249	0	86	18	538	678	163	14.71	1.06	31.79	
00014	1,669	3,336	81	0	81	0	27	3	196	213	54	4.86	0.18	11.75	
00020	32	62	1	0	1	0	1	0	0	4		3.23	0.00	0.00	
00024	6,838	13,663	352	51	403	0	230	160	4,040	710	173	5.90	2.34	59.14	
00026	42	84	3	0	3	0	1	1	1	0	2	7.14	2.38	2.38	
00032	1,947	4,050	78	8	86	0	46	10	498	410	40	4.25	0.49	24.59	
00041	5,090	11,027	260	80	340	0	135	30	509	2,787	205	6.17	0.54	9.23	
00043	394	923	49	10	59	0	10	10	361	42	49	12.78	2.17	78.22	
00047	2,219	4,437	172	0	172	1	53	17	405	1,606	118	7.75	0.81	18.26	
00053	125	313	23	3	26	0	6	6	155	0	20	16.61	3.83	99.04	
00058	553	1,171	15	13	28	0	7	7	262	30	21	4.78	1.20	44.75	
00065	2,266	4,064	109	7	116	0	39	4	155	924	77	5.71	0.20	7.63	
00075	372	889	26	2	28	0	19	3	73	128	9	6.30	0.67	16.42	
00079	306	612	18	0	18	0	8	6	282	22	10	5.88	1.96	92.16	
00090	2,749	5,727	96	1	97	0	43	2	61	742	54	3.39	0.07	2.13	
00099	5,801	11,636	107	16	123	0	56	11	463	1,123	67	2.11	0.19	7.96	
00101	32	55	9	0	9	0	9	9	25	0		32.73	32.73	90.91	
00106	4,938	10,271	267	7	274	2	134	34	682	3,765	138	5.34	0.70	13.28	
00107	3,044	6,522	166	39	205	0	64	27	689	509	141	6.29	0.83	21.13	
00109	1,720	3,480	102	11	113	0	44	7	111	804	69	6.49	0.40	6.38	
00116	199	428	12	0	12	0	8	8	151	0	4	5.61	3.74	70.56	
00118	1,380	2,913	98	14	112	0	69	15	440	1,506	43	7.69	1.03	30.21	
00121	350	980	23	3	26	0	23	26	658	161	3	5.31	5.31	134.29	

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REFINING (continued)															
00138	185	142	6	0	6	0	3	3	78	0	3	8.45	4.23	109.86	
00175	287	530	42	15	57	0	16	11	107	124	41	21.51	4.15	40.38	
00190	220	449	17	0	17	0	17	8	177	54		7.57	3.56	78.84	
00192	351	787	40	26	66	0	35	21	350	493	31	16.77	5.34	88.95	
00217	405	683	56	0	56	0	24	24	381	243	32	16.40	7.03	111.57	
00218	94	196	2	0	2	0	0	0	0	0	2	2.04	0.00	0.00	
00228	879	1,545	37	1	38	0	10	9	145	18	28	4.92	1.17	18.77	
00245	709	1,598	36	5	41	0	14	12	113	30	27	5.13	1.50	14.14	
00248	1,115	2,360	47	0	47	0	18	5	230	184	29	3.98	0.42	19.49	
00250	1,184	2,367	75	2	77	1	35	33	624	0	41	6.51	2.87	52.72	
00251	2,604	5,345	95	20	115	1	42	21	675	627	72	4.30	0.82	25.26	
00263	142	299	8	1	9	0	6	6	44	46	3	6.02	4.01	29.43	
MARKETING-WHOLESALE															
Total	22,081	43,896	847	18	865	0	451	310	5,554	1,430	414	3.94	1.41	25.31	
00003	52	104	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00005	86	172	1	0	1	0	0	0	0	0	1	1.16	0.00	0.00	
00013	2,934	5,592	322	1	323	0	89	55	811	254	234	11.55	1.97	29.01	
00014	569	1,581	33	0	33	0	19	4	14	133	14	4.17	0.51	1.77	
00026	8	16	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00041	3,473	7,224	82	10	92	0	54	23	290	229	38	2.55	0.64	8.03	
00047	1,517	3,035	40	0	40	0	28	16	483	168	12	2.64	1.05	31.83	
00058	96	200	5	0	5	0	2	2	10	5	3	5.00	2.00	10.00	
00065	1,101	2,013	29	2	31	0	16	5	520	135	15	3.08	0.50	51.66	
00075	87	181	2	0	2	0	1	1	42	49	1	2.21	1.10	46.41	
00090	582	1,502	3	1	4	0	2	1	10	5	2	0.53	0.13	1.33	
00099	2,451	5,272	57	1	58	0	40	9	270	384	18	2.20	0.34	10.24	
00100	10	20	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00101	67	154	3	0	3	0	3	3	13	0		3.90	3.90	16.88	
00103	25	50	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00106	4,482	9,322	79	0	79	0	58	58	1	0	21	1.69	1.24	0.02	
00109	2,592	3,463	59	2	61	0	26	23	303	68	35	3.52	1.33	17.50	
00140	19	40	1	0	1	0	0	0	0	0	1	5.00	0.00	0.00	
00184	1	2	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00250	840	1,679	99	1	100	0	83	80	1,703	0	17	11.91	9.53	202.86	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
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Co. No.	Average Number of Employees	Hours Worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Workday Cases	f. Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Work days Days Away From Work	Function
MARKETING-WHOLESALE (continued)															
00251	1,089	2,274	32	0	32	0	30	30	1,084	0					
MARKETING-RETAIL															
Total	37,668	72,786	1,907	18	1,925	2	864	400	9,259	5,461	1,039	5.29	1.10	25.44	
00013	9,068	17,479	394	8	402	0	111	88	3,510	257	291	4.60	1.01	40.16	
00041	5,677	10,044	207	6	213	0	70	29	495	521	143	4.24	0.58	9.86	
00047	16,432	32,865	1,072	0	1,072	0	560	165	3,520	4,577	512	6.52	1.00	21.42	
00058	265	583	3	0	3	0	2	2	12	0	1	1.03	0.69	4.12	
00071	665	1,300	59	3	62	0	23	23	119	0	39	9.54	3.54	18.31	
00090	1,190	3,747	30	0	30	1	14	3	54	89	15	1.60	0.21	2.88	
00099	401	816	18	1	19	0	7	5	187	17	12	4.66	1.23	45.83	
00101	28	69	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00250	2,942	5,883	124	0	124	1	97	85	1,362	0	26	4.22	2.92	46.30	
MARKETING-NOT SEPARATED[3]															
Total	16,669	33,115	638	17	655	0	292	241	4,600	1,504	363	3.96	1.46	27.78	
00011	1,288	2,076	56	0	56	0	28	24	1,333	4	28	5.39	2.31	128.42	
00024	3,886	8,081	119	3	122	0	88	85	1,418	204	34	3.02	2.10	35.09	
00032	3,971	8,258	28	1	29	0	8	1	7	96	21	0.70	0.02	0.17	
00064	3,984	7,250	283	0	283	0	67	67	1,071	458	216	7.81	1.85	29.54	
00107	2,007	4,058	83	3	86	0	64	56	709	62	22	4.24	2.76	34.94	
00118	1,533	3,392	69	10	79	0	37	8	62	680	42	4.66	0.47	3.66	
PIPELINE-LIQUID															
Total	10,152	20,621	306	28	334	1	136	88	2,380	916	197	3.24	0.86	23.08	
00011	91	197	3	0	3	0	0	0	0	0	3	3.05	0.00	0.00	
00017	645	1,443	33	10	43	0	17	17	458	0	26	5.96	2.36	63.48	
00021	249	483	7	1	8	0	1	1	9	142	7	3.31	0.41	3.73	
00029	685	1,412	14	0	14	0	8	8	100	2	6	1.98	1.13	14.16	
00033	17	35	3	0	3	0	1	1	3	7	2	17.14	5.71	17.14	
00038	132	300	8	0	8	0	1	1	9	0	7	5.33	0.67	6.00	
00041	600	1,219	15	1	16	0	5	5	135	0	11	2.63	0.82	22.15	
00043	66	126	2	0	2	0	0	0	0	0	2	3.17	0.00	0.00	
00047	479	956	4	0	4	0	2	2	6	0	2	0.84	0.42	1.25	
00065	439	840	11	1	12	0	3	1	14	32	9	2.86	0.24	3.33	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
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Co. No.	Average Number of Employees	Hours worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Workday Cases	f. Lost Workday Cases: Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Workdays Away From Work	Function
PIPELINE-LIQUID (continued)															
00079	35	80	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00083	70	134	5	0	5	0	2	2	6	0	3	7.46	2.99	8.96	
00086	63	131	2	0	2	0	1	1	8	26	1	3.05	1.53	12.21	
00091	319	607	4	0	4	1	1	1	5	0	2	1.32	0.66	1.65	
00092	40	78	4	0	4	0	1	1	47	0	3	10.26	2.56	120.51	
00093	35	68	2	0	2	0	2	2	2	0		5.88	5.88	5.88	
00099	1,080	2,117	12	2	14	0	5	2	34	9	9	1.32	0.19	3.21	
00106	706	1,606	23	2	25	0	10	5	116	423	15	3.11	0.62	14.45	
00111	390	927	15	0	15	0	7	0	0	96	8	3.24	0.00	0.00	
00118	337	669	10	0	10	0	4	2	111	71	6	2.99	0.60	33.18	
00122	140	280	5	0	5	0	1	1	8	3	4	3.57	0.71	5.71	
00126	672	1,403	39	9	48	0	26	1	405	42	22	6.84	0.14	57.73	
00164	66	142	2	0	2	0	1	1	19	0	1	2.82	1.41	26.76	
00233	1,196	2,119	23	0	23	0	12	12	243	0	11	2.17	1.13	22.94	
00237	55	104	2	0	2	0	2	2	51	0		3.85	3.85	98.08	
00238	189	388	6	0	6	0	4	4	64	0	2	3.09	2.06	32.99	
00239	445	890	12	1	13	0	9	9	449	0	4	2.92	2.02	100.90	
00241	78	138	1	0	1	0	0	0	0	0	1	1.45	0.00	0.00	
00242	4	9	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00243	74	154	9	0	9	0	5	1	45	58	4	11.69	1.30	58.44	
00247	105	205	4	0	4	0	1	1	12	0	3	3.90	0.98	11.71	
00255	476	977	18	0	18	0	3	3	20	0	15	3.68	0.61	4.09	
00256	12	27	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00258	14	24	1	1	2	0	1	1	1	0	1	16.67	8.33	8.33	
00260	51	102	2	0	2	0	0	0	0	0	2	3.92	0.00	0.00	
00266	81	193	5	0	5	0	0	0	0	5	5	5.18	0.00	0.00	
00268	16	36	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
PIPELINE-GAS															
Total	14,541	31,108	617	52	669	0	340	238	4,183	2,828	329	4.30	1.53	26.89	
00010	37	77	3	0	3	0	1	1	1	0	2	7.79	2.60	2.60	
00030	1,201	2,336	35	2	37	0	13	13	363	0	24	3.17	1.11	31.08	
00031	3,338	7,515	150	15	165	0	64	64	800	406	101	4.39	1.70	21.29	
00041	138	276	2	0	2	0	1	1	3	0	1	1.45	0.72	2.17	
00056	4,706	8,877	268	11	279	0	216	127	1,959	2,058	63	6.29	2.86	44.14	

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Co. No.	Average Number of Employees	Hours worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	Lost Workday Cases e. Total Lost Work-day Cases	f. Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Workdays Days Away From Work	Function
PIPELINE-GAS (continued)															
00074	83	159	1	0	1	0	0	0	0	0	1	1.26	0.00	0.00	
00083	25	48	3	0	3	0	3	3	45	0		12.50	12.50	187.50	
00100	20	26	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00108	3,000	7,440	72	0	72	0	13	13	514	0	59	1.94	0.35	13.82	
00124	248	483	4	0	4	0	2	0	0	8	2	1.66	0.00	0.00	
00162	1,373	3,155	64	20	84	0	24	13	199	356	60	5.32	0.82	12.61	
00205	305	583	10	4	14	0	2	2	297	0	12	4.80	0.69	101.89	
00236	51	100	5	0	5	0	1	1	2	0	4	10.00	2.00	4.00	
00240	7	13	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00265	9	20	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
PIPELINE-NOT SEPARATED[4]															
Total	10,308	20,452	306	10	316	1	165	117	2,787	585	150	3.09	1.15	27.25	
00013	906	1,865	45	0	45	0	18	5	354	148	27	4.83	0.54	37.96	
00014	1,057	2,112	50	4	54	0	21	19	978	28	33	5.11	1.80	92.61	
00023	5	12	1	0	1	0	1	1	1	0		16.67	16.67	16.67	
00024	764	1,600	9	1	10	0	7	7	217	0	3	1.25	0.88	27.13	
00032	2,567	4,284	55	2	57	0	37	7	133	357	20	2.66	0.33	6.21	
00058	52	108	1	0	1	0	0	0	0	3	1	1.85	0.00	0.00	
00060	350	639	10	1	11	0	3	2	78	5	8	3.44	0.63	24.41	
00090	588	1,223	5	0	5	0	3	1	23	30	2	0.82	0.16	3.76	
00107	732	1,466	27	1	28	0	17	17	172	0	11	3.82	2.32	23.47	
00109	1,856	4,069	66	1	67	1	39	39	488	5	27	3.29	1.97	23.99	
00144	937	1,967	25	0	25	0	10	10	179	0	15	2.54	1.02	18.20	
00175	86	138	3	0	3	0	3	3	80	0		4.35	4.35	115.94	
00250	117	234	6	0	6	0	4	4	60	0	2	5.13	3.42	51.28	
00261	148	297	2	0	2	0	2	2	24	9		1.35	1.35	16.16	
00264	203	436	1	0	1	0	0	0	0	0	1	0.46	0.00	0.00	
MARINE-TANKER															
Total	1,487	4,484	77	0	77	0	62	55	1,667	109	15	3.43	2.45	74.35	
00014	587	1,398	33	0	33	0	33	33	1,069	0		4.72	4.72	152.93	
00041	626	1,927	24	0	24	0	18	11	587	109	6	2.49	1.14	60.92	
00106	174	362	2	0	2	0	2	2	2	0		1.10	1.10	1.10	
00252	100	797	18	0	18	0	9	9	9	0	9	4.52	2.26	2.26	
MARINE-INLAND															
Total	701	2,664	62	0	62	0	43	31	676	0	19	4.65	2.33	50.75	

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MARINE-INLAND (continued)															
00041	330	1,394	9	0	9	0	2	2	67	0	7	1.29	0.29	9.61	
00083	3	6	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00106	65	135	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00250	223	446	45	0	45	0	34	22	602	0	11	20.18	9.87	269.96	
00252	80	683	8	0	8	0	7	7	7	0	1	2.34	2.05	2.05	
MARINE-NOT SEPARATED[5]															
Total	1,116	4,967	67	1	68	1	35	24	1,250	87	32	2.74	1.01	50.33	
00013	342	1,479	25	1	26	1	15	6	327	81	10	3.52	0.95	44.22	
00032	203	1,476	3	0	3	0	1	0	0	5	2	0.41	0.00	0.00	
00041	135	245	2	0	2	0	0	0	0	0	2	1.63	0.00	0.00	
00107	412	1,717	37	0	37	0	19	18	923	1	18	4.31	2.10	107.51	
00118	24	50	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
RESEARCH AND DEVELOPMENT															
Total	9,305	18,977	176	28	204	0	67	30	298	898	137	2.15	0.32	3.14	
00011	106	217	2	0	2	0	0	0	0	0	2	1.84	0.00	0.00	
00013	232	477	9	0	9	0	6	1	24	50	3	3.77	0.42	10.06	
00014	116	241	1	0	1	0	0	0	0	0	1	0.83	0.00	0.00	
00032	782	1,625	9	0	9	0	3	0	0	22	6	1.11	0.00	0.00	
00042	1,187	2,375	13	5	18	0	10	3	20	170	8	1.52	0.25	1.68	
00065	306	565	4	1	5	0	2	2	6	0	3	1.77	0.71	2.12	
00068	30	62	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00090	864	1,794	12	0	12	0	6	2	12	85	6	1.34	0.22	1.34	
00099	1,962	4,037	15	7	22	0	4	0	0	282	18	1.09	0.00	0.00	
00106	1,882	3,874	31	5	36	0	11	4	53	237	25	1.84	0.20	2.71	
00107	198	397	5	1	6	0	1	0	0	1	5	3.02	0.00	0.00	
00109	851	1,757	53	0	53	0	9	9	102	1	44	6.03	1.02	11.61	
00118	789	1,516	22	9	31	0	15	9	81	50	16	4.09	1.19	10.69	
GENERAL SERVICES															
Total	3,405	6,961	73	3	76	0	34	10	75	306	42	2.18	0.29	2.15	
00013	106	209	3	0	3	0	2	0	0	9	1	2.87	0.00	0.00	
00014	461	962	12	1	13	0	0	0	0	0	13	2.70	0.00	0.00	
00032	491	1,022	10	0	10	0	4	3	23	30	6	1.96	0.39	4.50	

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GENERAL SERVICES (continued)															
00041	514	1,069	3	2	5	0	2	2	10	15	3	0.94	0.37	1.87	
00042	407	813	10	0	10	0	8	1	1	86	2	2.46	0.25	0.25	
00065	218	400	4	0	4	0	0	0	0	0	4	2.00	0.00	0.00	
00074	153	304	8	0	8	0	3	2	9	40	5	5.26	1.32	5.92	
00090	677	1,425	10	0	10	0	9	1	3	56	1	1.40	0.14	0.42	
00099	398	757	13	0	13	0	6	1	29	70	7	3.43	0.26	7.66	
ADMINISTRATION, ENGINEERING, AND OTHER															
Total	51,349	104,249	577	79	656	1	327	197	3,183	2,213	328	1.26	0.38	6.11	
00005	736	1,472	2	1	3	0	3	3	27	0		0.41	0.41	3.67	
00011	589	1,134	4	0	4	0	1	1	17	0	3	0.71	0.18	3.00	
00013	2,298	4,561	72	17	89	0	29	12	192	62	60	3.90	0.53	8.42	
00014	3,493	7,822	103	9	112	0	46	37	920	291	66	2.86	0.95	23.52	
00022	87	155	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00023	917	1,611	2	0	2	0	2	2	74	0		0.25	0.25	9.19	
00024	519	904	6	0	6	0	4	4	13	15	2	1.33	0.88	2.88	
00025	52	109	3	0	3	0	1	1	58	0	2	5.50	1.83	106.42	
00026	23	46	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00027	922	1,909	15	0	15	0	6	6	189	0	9	1.57	0.63	19.80	
00032	3,504	7,288	15	2	17	0	5	4	39	1	12	0.47	0.11	1.07	
00041	3,938	8,192	26	4	30	0	14	10	58	46	16	0.73	0.24	1.42	
00042	969	1,916	3	0	3	0	0	0	0	0	3	0.31	0.00	0.00	
00047	240	480	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00062	24	46	1	0	1	0	1	1	23	18		4.35	4.35	100.00	
00065	1,974	3,460	9	0	9	0	5	5	55	31	4	0.52	0.29	3.18	
00068	65	134	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00074	241	450	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00075	270	563	2	0	2	0	0	0	0	0	2	0.71	0.00	0.00	
00077	10	21	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00083	25	48	1	0	1	0	1	1	4	0		4.17	4.17	16.67	
00090	1,864	3,868	1	13	14	0	0	0	0	0	14	0.72	0.00	0.00	
00093	20	41	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00095	1,734	3,451	113	0	113	0	80	18	353	617	33	6.55	1.04	20.46	
00099	4,640	8,771	14	1	15	0	8	3	9	57	7	0.34	0.07	0.21	
00100	22	44	1	0	1	0	0	0	0	0	1	4.55	0.00	0.00	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES

Co. No.	Average Number of Employees	Hours Worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	Lost Workday Cases e. Total Lost Work-day Cases	f. Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Work-days	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Work days Days Away From Work	Function
ADMINISTRATION, ENGINEERING, AND OTHER (continued)															
00106	9,580	19,925	81	18	99	0	64	43	484	884	35	0.99	0.43	4.86	
00107	1,491	2,987	8	0	8	0	2	1	3	70	6	0.54	0.07	0.20	
00109	4,867	9,887	55	9	64	0	28	27	389	46	36	1.29	0.55	7.87	
00118	1,900	3,840	15	5	20	1	10	6	102	68	9	1.04	0.36	5.31	
00125	82	149	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00140	183	381	1	0	1	0	1	0	0	0		0.52	0.00	0.00	
00175	73	137	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00191	174	362	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00215	805	1,791	6	0	6	0	4	4	17	7	2	0.67	0.45	1.90	
00235	1,050	2,130	4	0	4	0	2	2	3	0	2	0.38	0.19	0.28	
00248	459	907	1	0	1	0	1	1	1	0		0.22	0.22	0.22	
00250	1,069	2,137	12	0	12	0	9	5	153	0	3	1.12	0.47	14.32	
00251	475	975	1	0	1	0	0	0	0	0	1	0.21	0.00	0.00	
00263	70	145	0	0	0	0	0	0	0	0		0.00	0.00	0.00	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES
OFFSHORE FUNCTIONS

1		2	3	4			5						6		
				Recordable Cases			Extent and Outcome of Injury and Illness						Incidence Rates		
				a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.
								Lost Workday Cases							
Function	Function Key[1]	Average Number of Employees	Hours Worked Thousands	Injuries	Illnesses	Total	Fatalities	Total Lost Workday Cases	Cases Involving Days Away From Work	Number of Days Away From Work	Number of Days of Restricted Activity	Non Fatal Cases Without Lost Workdays	Total Cases	Fatal plus Days Away From Work Cases	Lost Workdays Days Away From Work
Off. Exploration	a	1,282	2,483	17	0	17	0	5	3	97	23	12	1.37	0.24	7.81
Off. Production	b	7,444	20,522	198	7	205	0	86	67	2,277	843	119	2.00	0.65	22.19
Off. Drilling	d	716	2,375	52	0	52	0	23	21	1,565	24	29	4.38	1.77	131.79
Comb. Not Sep.[2]	abd	1,470	2,985	73	0	73	0	38	33	660	26	35	4.89	2.21	44.22
Total Offshore		10,912	28,365	340	7	347	0	152	124	4,599	916	195	2.45	0.87	32.43

Incidence Rates (Column 6) are calculated as follows:

Column 6(j) = $\frac{\text{Column 4(c)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$ Column 6(k) = $\frac{\text{Column 5(d)} + \text{5(f)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$ Column 6(l) = $\frac{\text{Column 5(g)} \times 200{,}000}{\text{Column 3} \times 1{,}000}$

[1]Keyed to definitions outlined in the API Fire and Safety Data System User's Manual.
[2]Exploration, Production and Drilling data unable to be separated as listed.

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES
OFFSHORE FUNCTIONS

The following code will indicate the functions for which each company reported:

a - Exploration b - Production d - Drilling abd - Comb. Not. Sep.

Co. No.	Average Number of Employees	Hours Worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	Extent and Outcome of Injury and Illness d. Fatalities	e. Lost Workday Cases: Total Lost Workday Cases	f. Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Workdays Away From Work	Function
ALL FUNCTIONS															
Total	10,912	28,365	340	7	347	0	152	124	4,599	916	195	2.45	0.87	32.43	
00005	99	198	8	0	8	0	7	7	131	0	1	8.08	7.07	132.32	b
00014	384	778	27	1	28	0	12	12	469	12	16	7.20	3.08	120.57	bd(zbd)
00023	36	65	2	0	2	0	1	1	21	0	1	6.15	3.08	64.62	b
00024	3,182	10,374	70	1	71	0	26	26	827	0	45	1.37	0.50	15.94	ab
00027	92	289	7	0	7	0	3	3	126	0	4	4.84	2.08	87.20	b
00041	1,212	2,526	22	4	26	0	7	4	106	377	19	2.06	0.32	8.39	ab
00058	815	3,186	55	1	56	0	22	22	1,580	273	34	3.52	1.38	99.18	bd
00065	368	1,243	18	0	18	0	10	5	361	104	8	2.90	0.80	58.09	bd
00099	2,879	5,848	48	0	48	0	22	8	276	129	26	1.64	0.27	9.44	abd
00102	60	122	1	0	1	0	1	1	72	0		1.64	1.64	118.03	a
00106	383	797	12	0	12	0	5	4	107	7	7	3.01	1.00	26.85	b
00118	450	837	40	0	40	0	25	20	341	14	15	9.56	4.78	81.48	(abd)
00140	10	21	0	0	0	0	0	0	0	0		0.00	0.00	0.00	a
00191	61	127	0	0	0	0	0	0	0	0		0.00	0.00	0.00	abd
00224	30	58	3	0	3	0	0	0	0	0	3	10.34	0.00	0.00	b
00226	150	384	4	0	4	0	2	2	20	0	2	2.08	1.04	10.42	(abd)
00227	110	299	12	0	12	0	4	4	41	0	8	8.03	2.68	27.42	b
00229	48	120	1	0	1	0	0	0	0	0	1	1.67	0.00	0.00	(abd)
00235	60	128	0	0	0	0	0	0	0	0		0.00	0.00	0.00	bd
00250	483	965	10	0	10	0	5	5	121	0	5	2.07	1.04	25.08	(abd)
OFF. EXPLORATION															
Total	1,282	2,483	17	0	17	0	5	3	97	23	12	1.37	0.24	7.81	
00024	360	526	6	0	6	0	1	1	4	0	5	2.28	0.38	1.52	
00041	284	598	2	0	2	0	0	0	0	0	2	0.67	0.00	0.00	
00099	536	1,149	8	0	8	0	3	1	21	23	5	1.39	0.17	3.66	
00102	60	122	1	0	1	0	1	1	72	0		1.64	1.64	118.03	
00140	10	21	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00191	32	67	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
OFF. PRODUCTION															
Total	7,444	20,522	198	7	205	0	86	67	2,277	843	119	2.00	0.65	22.19	

OCCUPATIONAL INJURIES AND ILLNESSES FOR THE YEAR 1990
COVERING PETROLEUM AND PETROCHEMICAL OPERATIONS OF REPORTING COMPANIES
OFFSHORE FUNCTIONS

Co. No.	Average Number of Employees	Hours Worked Thousands	Recordable Cases a. Injuries	b. Illnesses	c. Total	d. Fatalities	Extent and Outcome of Injury and Illness: Lost Workday Cases e. Total Lost Workday Cases	f. Cases Involving Days Away From Work	g. Number of Days Away From Work	h. Number of Days of Restricted Activity	i. Non Fatal Cases Without Lost Workdays	Incidence Rates j. Total Cases	k. Fatal plus Days Away From Work Cases	l. Lost Workdays Away From Work	Function
OFF. PRODUCTION (continued)															
00005	99	198	8	0	8	0	7	7	131	0	1	8.08	7.07	132.32	
00014	31	68	8	1	9	0	6	6	291	0	3	26.47	17.65	855.88	
00023	36	65	2	0	2	0	1	1	21	0	1	6.15	3.08	64.62	
00024	2,822	9,848	64	1	65	0	25	25	823	0	40	1.32	0.51	16.71	
00027	92	289	7	0	7	0	3	3	126	0	4	4.84	2.08	87.20	
00041	928	1,928	20	4	24	0	7	4	106	377	17	2.49	0.41	11.00	
00058	400	1,421	8	1	9	0	1	1	15	256	8	1.27	0.14	2.11	
00065	362	1,231	18	0	18	0	10	5	361	104	8	2.92	0.81	58.65	
00099	2,078	4,172	36	0	36	0	17	7	255	99	19	1.73	0.34	12.22	
00106	383	797	12	0	12	0	5	4	107	7	7	3.01	1.00	26.85	
00191	25	52	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00224	30	58	3	0	3	0	0	0	0	0	3	10.34	0.00	0.00	
00227	110	299	12	0	12	0	4	4	41	0	8	8.03	2.68	27.42	
00235	48	96	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
OFF. DRILLING															
Total	716	2,375	52	0	52	0	23	21	1,565	24	29	4.38	1.77	131.79	
00014	14	31	1	0	1	0	0	0	0	0	1	6.45	0.00	0.00	
00058	415	1,765	47	0	47	0	21	21	1,565	17	26	5.33	2.38	177.34	
00065	6	12	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00099	265	527	4	0	4	0	2	0	0	7	2	1.52	0.00	0.00	
00191	4	8	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
00235	12	32	0	0	0	0	0	0	0	0		0.00	0.00	0.00	
COMBINATION OF EXPLORATION, PRODUCTION AND DRILLING[2]															
Total	1,470	2,985	73	0	73	0	38	33	660	26	35	4.89	2.21	44.22	
00014	339	679	18	0	18	0	6	6	178	12	12	5.30	1.77	52.43	
00118	450	837	40	0	40	0	25	20	341	14	15	9.56	4.78	81.48	
00226	150	384	4	0	4	0	2	2	20	0	2	2.08	1.04	10.42	
00229	48	120	1	0	1	0	0	0	0	0	1	1.67	0.00	0.00	
00250	483	965	10	0	10	0	5	5	121	0	5	2.07	1.04	25.08	

1990 FATALITY INFORMATION

FIFTY-EIGHTH ANNUAL SUMMARY OF FATAL INJURIES AS REPORTED TO THE AMERICAN PETROLEUM INSTITUTE BY THE PETROLEUM INDUSTRY FOR 1990

ON DUTY FATAL INJURIES

One hundred and twenty oil and gas companies and their subsidiaries, employing over 319,100 workers, reported 14 on-duty fatal accidents during 1990. This is equivalent to one fatality for every 22,794 workers employed, as compared to one fatality for every 6,002 workers in 1989.

Eleven companies submitted detailed information on the circumstances surrounding all 14 of the on-duty fatal accidents.

The American Petroleum Institute (API) has published information on fatal accidents in the petroleum industry since 1933. Each incident is described in a brief narrative format and is intended to provide information that could be used to avoid the occurrence of similar accidents in the future.

NOTE: These data cover company employees only; contractor safety statistics are not included.

PRODUCTION

1/29/90 -- Motor Vehicle

A field operator was fatally injured in an motor vehicle accident traveling from the company office to his home after work. An oncoming pickup truck exceeding speed limit swerved across the center line of the highway and struck left front of employee's vehicle. Impact knocked employee vehicle backwards and off the road into a dirt bank. Impact caused rear of employee vehicle to lift off pavement. Another vehicle travelling behind employee took evasive action to the right landing in a drainage ditch. The rear of the employee vehicle landed on the hood of the third vehicle.

6/7/90 -- Other Transportation

A maintenance assistant died while operating a tractor. The tractor was being used for gravel road maintenance and overturned due to the grade of the shoulder. It is unknown why the employee backed the tractor off the roadway. The tractor was not equipped with a roll bar or seatbelt.

GAS PROCESSING

10/6/90 -- Toxic Gas or Liquid

A mechanic died from asphyxiation by toxic vapors/fumes. The employee leaned through a small opening in an underground tank used as a sump to collect steam from an overhead condenser. He apparently could not back out and died by suffocation breathing in hydrocarbon fumes.

REFINING

1/6/90 -- Fall

A process/equipment operator died from a skull fracture after falling from an overhead piperack while opening a valve.

2/21/90 -- Fires and Explosions

A shift supervisor and a chief operator died from blast injuries. The joint Union-Management Committee assigned to investigate the facts and cause of the February 20, 1990 explosion and fire that resulted in these two fatalities at the LPG truck loading facility has completed its investigation. The Committee concluded that the explosion was brought about by a sequence of errors in which pure oxygen was delivered, connected, and subsequently introduced into a small loading rack odorant storage vessel.

This vessel contained ethyl mercaptan that is normally pressurized with nitrogen. The inert nitrogen serves to pressure small, metered volumes of ethyl mercaptan odorant into the LPG product as it is loaded into trucks.

Nitrogen is delivered to the site in clusters of gas cylinders. In early February, two clusters of oxygen cylinders were inadvertently delivered to the site. Sometime later, one of these clusters was connected to the odorant pressurizing system after removal of special fittings designed to avoid such a connection.

At the time of the February 20th explosion, the crew was troubleshooting problems with the odorant injection system. As part of this effort, they vented the odorant injection system. Because the oxygen cylinders were connected to the system, nitrogen in the odorant storage vessel was automatically replaced with oxygen. A technical assessment indicates that oxygen would react with liquid mercaptan, raising its temperature and developing a flammable vapor space. The Committee concluded that these flammable vapors were ignited either by pyrophoric/catalytic deposits in adjoining lines, or by hot particles swept into the vessel by the oxygen. The internal detonation resulted in extremely high pressures sufficient to fracture the vessel. The ensuing fire was fed from a back-up mercaptan storage tank and severed propane piping.

A joint Union-Management Subcommittee of the refinery's Health and Safety Committee has been formed to develop recommendations to prevent the recurrence of such an incident and its tragic consequences.

2/28/90 -- Struck by Equipment

A project engineer died from multiple trauma including a crushing head injury. Two engineers were observing a dump truck being loaded by a front end loader with petroleum coke with their backs to the road into the loading area. A second dump truck backed into the loading area and struck the employees. One employee jumped clear while the other was run over by the backing dump truck.

Employees were in an area with heavy equipment in operation. Employees did not either hear or respond to the backing dump truck back up alarm. Warning signs to alert employees of the danger of the loading area and instructions for employees to avoid area where heavy equipment is in operation are possible mitigating measures.

MARKETING - RETAIL

4/30/90 -- Other - Robbery

A cashier in a service station was robbed and beaten and died of heart failure.

7/11/90 -- Struck by Equipment

A service station worker died from massive trauma. The employee was assisting a handicapped motorist who came into the station in a wheelchair after his car ran out of gas. While carrying fuel to the customer's car, the employee was struck by an oncoming vehicle.

PIPELINE - LIQUID

2/10/90 -- Other - Homicide

A terminal operator was called out to investigate an alarm at a remote station. Employee reached station and called in, stating that there were no operational problems. The pipeline was started back up with no difficulties. Employee was scheduled to catch a batch change for later that day at another station and did not. Another employee was sent to follow up on the first employee. The second employee found the first employee dead at the first remote station he had been called out to the night before. Police are continuing to investigate the homicide. No convictions have been made. Rewards are being offered for information on this crime.

9/2/90 -- Motor Vehicle

A truck driver was fatally injured while rounding a curve when he lost control of a semi-tractor and it overturned.

ADMINISTRATIVE, ENGINEERING AND OTHER

6/20/90 -- Fall

An electrician fell while working on an extension ladder onto deck of an offshore platform during conduit installation operation. The fall was approximately 12-15 feet and employee received a fatal head injury.

PARTICIPATING COMPANIES

CODE	NAME
225	Abercrombie Companies
10	Alabama-Tennessee Natural Gas Company
233	Alyeska Pipeline Service Company
106	Amoco Corporation
13	Ashland Petroleum Company
14	Atlantic Richfield Company
191	BHP Petroleum (Americas), Inc.
246	BP Exploration (Alaska)
235	BP Exploration
47	BP Oil Company
17	Buckeye Pipe Line Company
268	Butte Pipe Line Company
19	Cabot Oil & Gas Corporation
20	Calcasieu Refining Company
21	Celeron / All American Pipeline Company
22	Celsius Energy Company
236	Cenex Pipeline Company
230	Centennial Natural Gas Company
228	Champlin Refining and Chemicals, Inc.
24	Chevron USA, Inc.
25	Cheyenne Light, Fuel and Power Company
26	Cibro Petroleum Products, Inc.
264	CITGO Pipeline Company
227	CNG Producing Company
266	Coastal States Crude Gathering Company
29	Colonial Pipeline Company
30	Colorado Interstate Gas Company
6	Colorado Refining Company
31	Columbia Gas Transmission Corporation
32	Conoco Inc.
33	Cook Inlet Pipe Line Company
217	Crown Central Petroleum Corporation
184	Daylight Engineering Company
260	Dome Pipeline Corporation
261	Dow Pipeline Company
205	Enogex Inc.
122	Enron Liquid Fuels Company
35	Enserch Exploration, Inc.
38	Explorer Pipeline Company
39	Exxon Chemical Americas
41	Exxon Company, U.S.A.
42	Exxon Research and Engineering Company

43	Farmland Industries, Inc.
11	Fina Oil and Chemical Company
190	Frontier Refining Inc.
193	Fuel Resources Development Company
241	GATX Terminals Corporation
48	H & D Operating Company
263	Hawaiian Independent Refinery
232	Hunt Petroleum Corporation
53	Indiana Farm Bureau Cooperative Association, Inc.
237	Jayhawk Pipeline Corporation
57	Kentucky Hydrocarbon
58	Kerr-McGee Corporation
56	KPL Gas Service
60	Lakehead Pipe Line Company, Inc.
62	Lario Oil and Gas Company
64	Lone Star Gas Company
248	Lyondell Petrochemical Corporation
218	MAPCO Alaska Petroleum Inc.
255	MAPCO Transportation, Inc.
65	Marathon Oil Company
224	Maxus Exploration Company
68	Merichem Company
215	Meridian Oil Company
247	Mid-Valley Pipeline Company
71	Mississippi Valley Gas Company
252	Mobil Oil Corporation (Marine) - Staten Island
144	Mobil Pipe Line Company
245	Mobil Research and Development Company
75	Murphy Oil USA, Inc.
175	National Cooperative Refinery Association
240	N.C.R.A. Products Pipeline
77	National Helium Corporation
79	Navajo Refining Company
83	Ohio Oil Gathering Corporation
86	Olympic Pipe Line Company
5	Oryx Energy Company
250	Other
27	Oxy USA, Inc.
254	Parker Drilling Company
90	Phillips Petroleum Company
91	Plantation Pipe Line Company
262	Pogo Producing Company
92	Portal Pipe Line Company
93	Portland Pipe Line Corporation
192	Powerine Oil Company
95	Public Service Company of Colorado

202	Quantum, USI Division
74	Questar Pipeline Company
140	Santa Fe Energy Resources, Inc.
239	Santa Fe Pacific Pipeline
243	Scurlock Oil Company
99	Shell Oil Company
100	Sid Richardson Carbon & Gasoline Company
101	The Somerset Refinery, Inc.
102	Sonat Exploration
103	South Kentucky Purchasing Company, Inc.
138	Southland Oil Company
251	Star Enterprise
107	Sun Company, Inc.
258	Sunnyland Pipe Line Company
3	Tauber Oil Company
108	Tenneco Oil Company
256	Tesoro Alaska Petroleum Company
265	Tesoro Alaska Pipeline Company
109	Texaco Inc.
111	Texas Eastern Products Pipeline Company
162	Texas Gas Transmission Corporation
242	Trans Mountain Oil Pipe Line Corporation
23	Union Pacific Resources
226	Union Texas Petroleum
121	United Refining Company
116	United States Oil and Refining Company
118	Unocal Corporation
238	West Coast Pipe Lines
124	Western Gas Supply Company
125	Wexpro Company
126	Williams Pipe Line Company
164	Wolverine Pipe Line Company

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